

Top line = human pleiotrophin (SEQ ID NO:1)  
Bottom line = mouse pleiotrophin (SEQ ID NO:2)

10	20	30	40	50	60
MQAQQYQQRRKF <del>AAA</del> FLAFIFILAAVDTAEGKKEKPEKKVKKSDCGEWQWSVCVPTSG					
MSSQQQYQQRRKF <del>AAA</del> FLALIFILAAVDTAEGKKEKPEKKVKKSDCGEWQWSVCVPTSG					
90	100	110	120	130	140
DCGLGTREGTRTGAECKQTMKTQRCKIPCNWKKQFGAECKYQFQAWGECDLNTALKTRTG					
DCGLGTREGTRTGAECKQTMKTQRCKIPCNWKKQFGAECKYQFQAWGECDLNTALKTRTG					
150	160	170	180		
SLKRALHNAECQKTVTISKPCGKLTKPKPQAESKKKKKEGKKQEKMLD					
SLKRALHNAD <del>C</del> QKTVTISKPCGKLTKPKPQAESKKKKKEGKKQEKMLD					

**FIG. 1A**

Amino acid sequence (SEQ ID NO:3) and the nucleotide sequence (SEQ ID NO:4) of the heavy chain variable region (VH) of 3B10.

CAGGTT CAGCTGCAGCAGTCTGGACCTGAGCTGGTGAAGCCTGGGGCCTCAGTGAAGATT  
Q V Q L Q Q S G P E L V K P G A S V K I

TCCTGCCAAGCTTCTGGCTACGCATT CAGTAGCCACTGGATGAACTGGGTGAAGCAGAGG  
S C Q A S G Y A F S S H W M N W V K Q R

CCTGGAAAGGGTCTTGAGTGGATTGGACGGATTTATCCTGGAGATGGAGATTCTCTCTAC  
P G K G L E W I G R I Y P G D G D S L Y

AATGGGAAGTTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCACCACAGTCTAC  
N G K F K G K A T L T A D K S S T T V Y

ATGCAGCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTACTTCTGTGCAAGAACGAGG  
M Q L S S L T S E D S A V Y F C A R T R

GCTTATGGTCCCGCCTGGTTTGCTTACTGGGGCCAAGGGA CTCTGGTCACTGTCTCT  
A Y G P A W F A Y W G Q G T L V T V S

GCA  
A

**FIG. 1B**

Amino acid sequence (SEQ ID NO:8) and the nucleotide sequence (SEQ ID NO:9) of the light chain variable region (VL) of 3B10.

GACATTGTGATGACACAGTCTCCATCCTCCCTGGCTATGTCAGTAGGACAGAAG

D I V M T Q S P S S L A M S V G Q K

GTCACCTTTGAGCTGCAGGTCCAGTCAGAGTCTTTTAGATAGTAACAATCAAAAGAAC

V T L S C R S S Q S L L D S N N Q K N

TATTTGGCCTGGTACCAGCAGAAACCGGGACAGTCTCCTAAACTTCTGGTATACYTT

Y L A W Y Q Q K P G Q S P K L L V Y -

GCATCTATTAGGGAATCTGGGGTCCCTGATCGCTTCATAGGCAGTGGATCTGGGACA

A S I R E S G V P D R F I G S G S G T

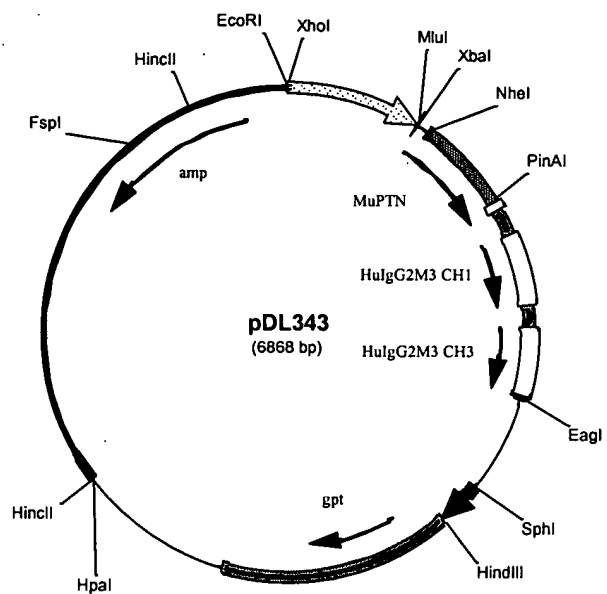
GATTTCACTCTTACCATCACCAGTGTGCAGGCTGAAGACCTGGCAGATTATTTCTGT

D F T L T I T S V Q A E D L A D Y F C

CAGCAACATTATAGCACTCCCCTCACGTTCCGGTGCTGGGACCAAGCTGGAGCTGAAA

Q Q H Y S T P L T F G A G T K L E L K

**FIG. 1C**



**FIG. 2**

Amino acid sequence of the murine PTN-Fc fusion protein (SEQ ID NO:13)

M	G	W	S	W	I	F	L	F	L	L	S	G	T	A	S	V	H	S	G	10	20
K	K	E	K	P	E	K	K	V	K	K	S	D	C	G	E	W	Q	W	S	30	40
V	C	V	P	T	S	G	D	C	G	L	G	T	R	E	G	T	R	T	G	50	60
A	E	C	K	Q	T	M	K	T	Q	R	C	K	I	P	C	N	W	K	K	70	80
Q	F	G	A	E	C	K	Y	Q	F	Q	A	W	G	E	C	D	L	N	T	90	100
A	L	K	T	R	T	G	S	L	K	R	A	L	H	N	A	D	C	Q	K	110	120
T	V	T	I	S	K	P	C	G	K	L	T	K	P	K	P	Q	A	E	S	130	140
K	K	K	K	K	E	G	K	K	Q	E	K	M	L	D	T	G	G	G	E	150	160
R	K	C	C	V	E	C	P	P	C	P	A	P	P	A	A	A	P	S	V	170	180
F	L	F	P	P	K	P	K	D	T	L	M	I	S	R	T	P	E	V	T	190	200
C	V	V	V	D	V	S	H	E	D	P	E	V	Q	F	N	W	Y	V	D	210	220
G	V	E	V	H	N	A	K	T	K	P	R	E	E	Q	F	N	S	T	F	230	240
R	V	V	S	V	L	T	V	V	H	Q	D	W	L	N	G	K	E	Y	K	250	260
C	K	V	S	N	K	G	L	P	A	P	I	E	K	T	I	S	K	T	K	270	280
G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	290	300
N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S	D	I	A	V	E	310	320
W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	M	L	D	S	330	340
D	G	S	F	F	L	Y	S	K	L	T	V	D	K	S	R	W	Q	Q	G	350	360
N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	370	380
L	S	L	S	P	G	K														387	

FIG. 3

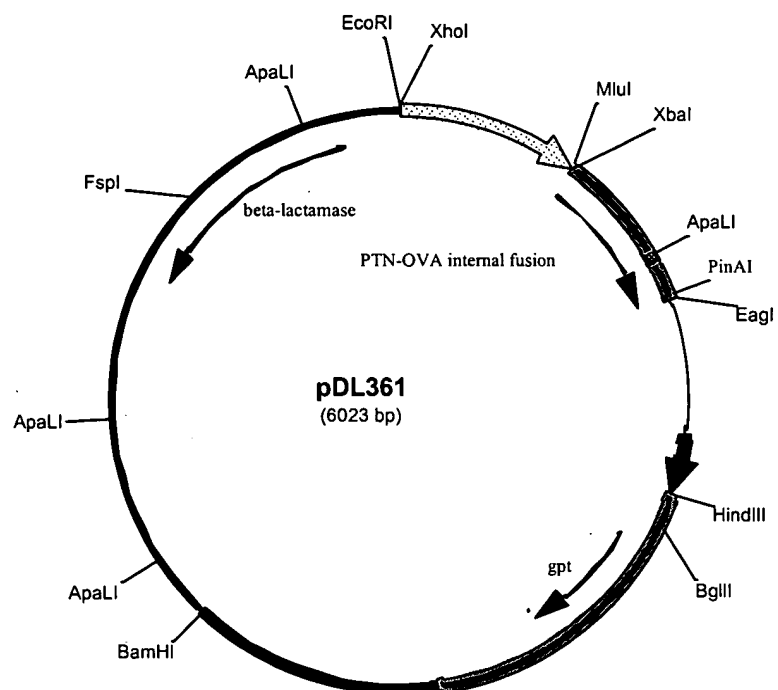


FIG. 4

Amino acid sequence of PTN-OVA fusion protein (SEQ ID NO:14). OVA insertion sequence (SEQ ID NO:15) is underlined.

```

      10                                     20
M  Q  A  Q  Q  Y  Q  Q  Q  R  R  K  F  A  A  A  F  L  A  F

      30                                     40
I  F  I  L  A  A  V  D  T  A  E  A  G  K  K  E  K  P  E  K

      50                                     60
K  V  K  K  S  D  C  G  E  W  Q  W  S  V  C  V  P  T  S  G

      70                                     80
D  C  G  L  G  T  R  E  G  T  R  T  G  A  E  C  K  Q  T  M

      90                                     100
K  T  Q  R  C  K  I  P  C  N  W  K  K  Q  F  G  A  E  C  K

     110                                     120
Y  Q  F  Q  A  W  G  E  C  D  L  N  T  A  L  K  T  R  T  G

     130                                     140
S  L  K  R  Q  A  V  H  A  A  H  A  E  I  N  E  C  Q  K  T

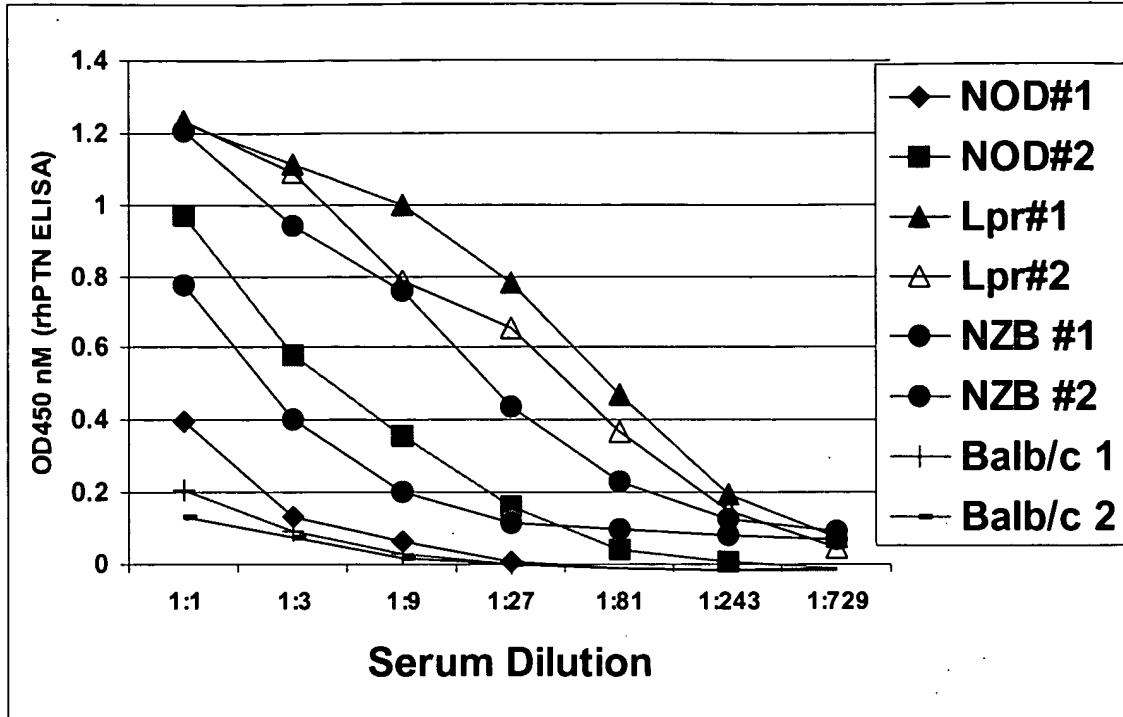
     150                                     160
V  T  I  S  K  P  C  G  K  L  T  K  P  K  P  Q  A  E  S  K

     170
K  K  K  K  E  G  K  K  Q  E  K  M  L  D

```

FIG. 5

(A)



(B)

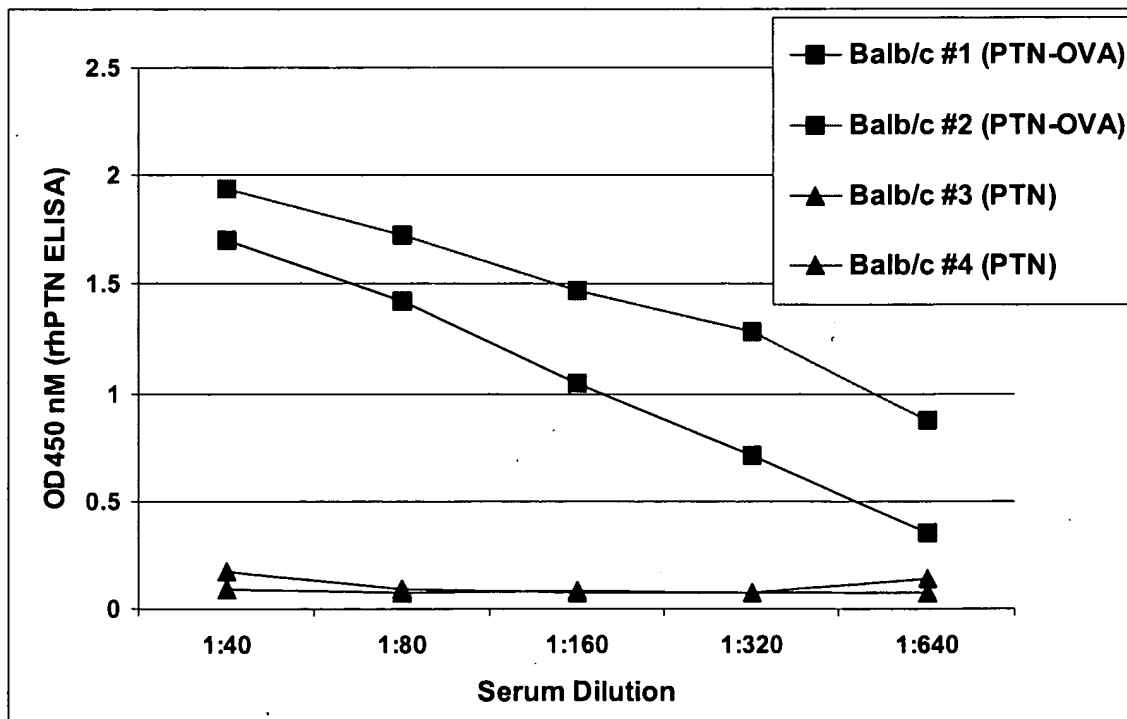


FIG. 6



(C)

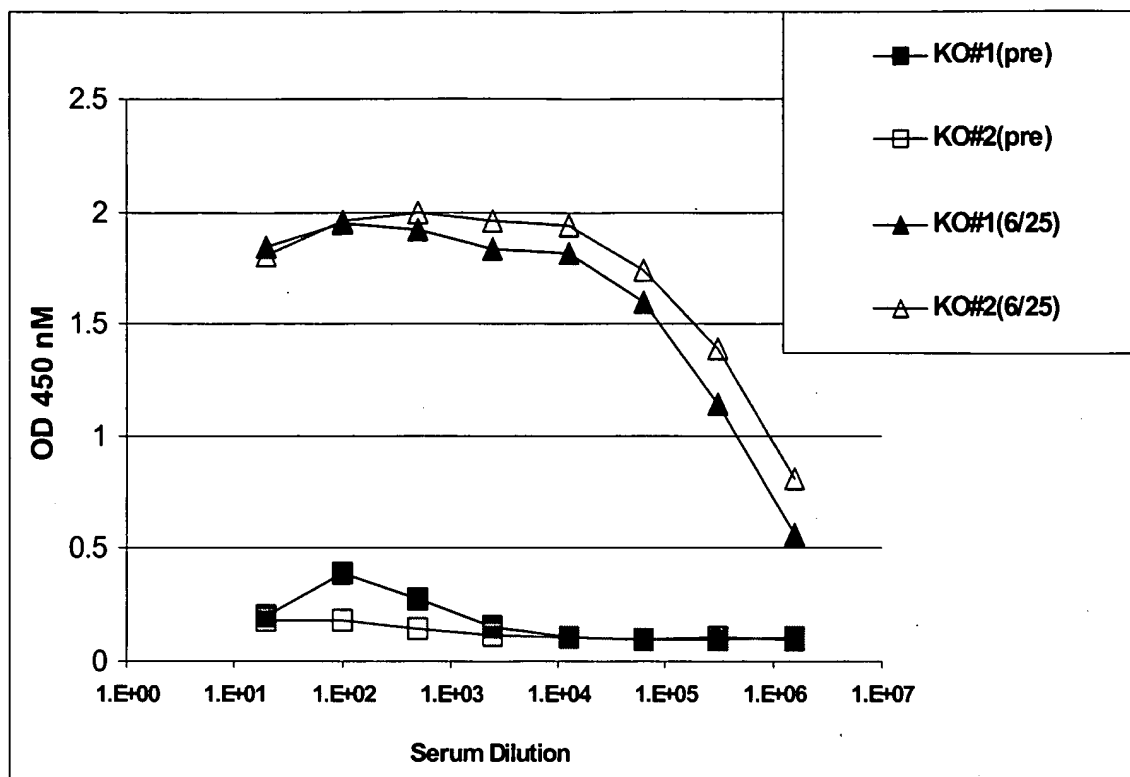


FIG. 6

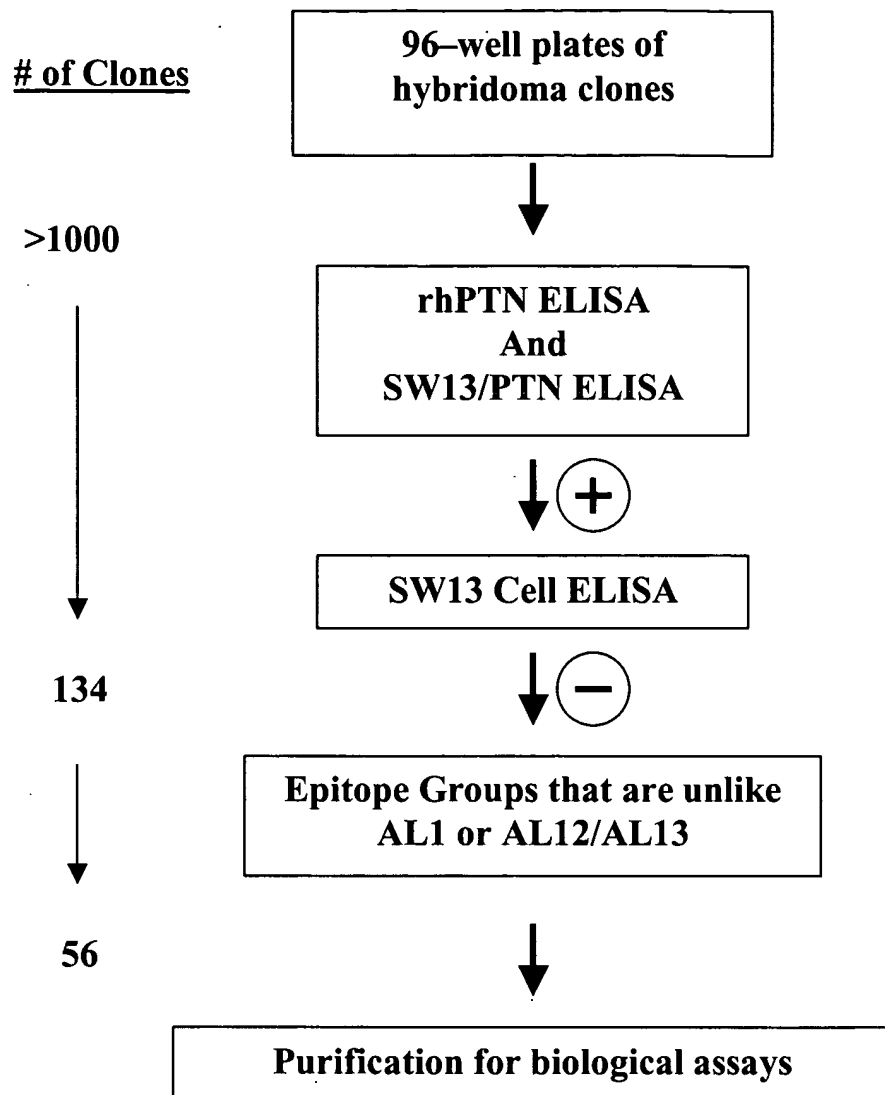


FIG. 7

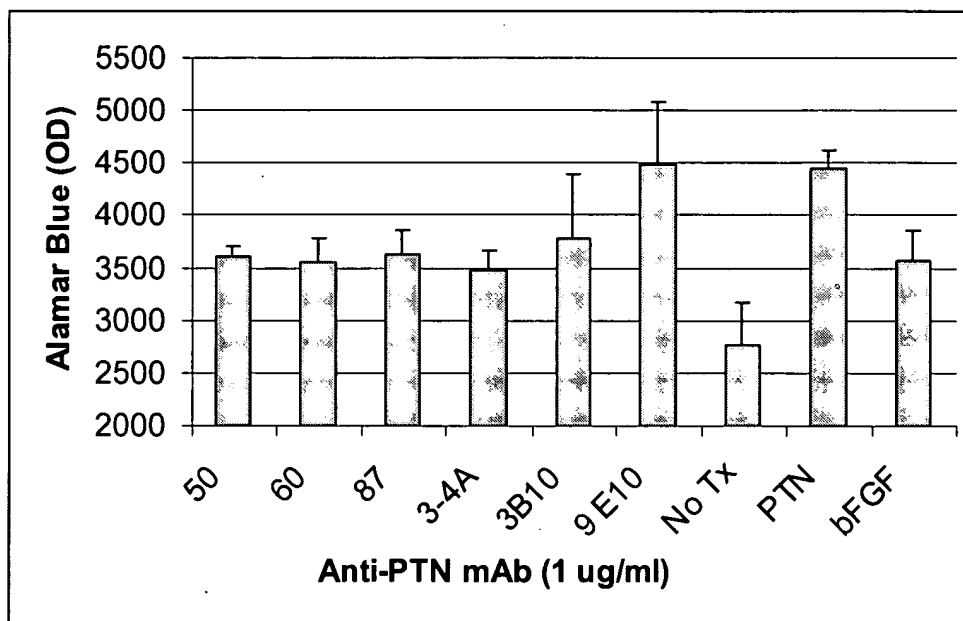
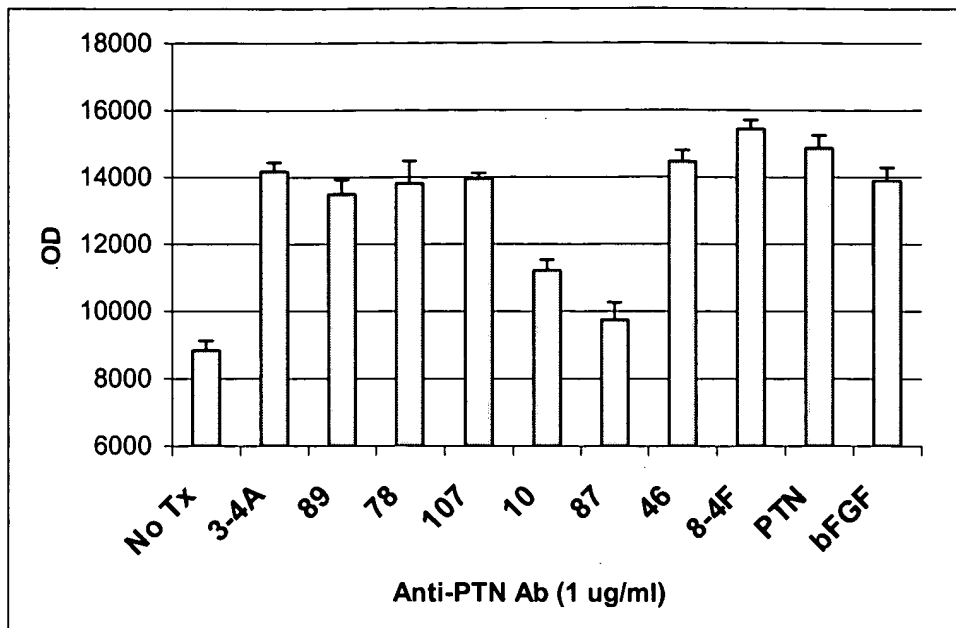


FIG. 8

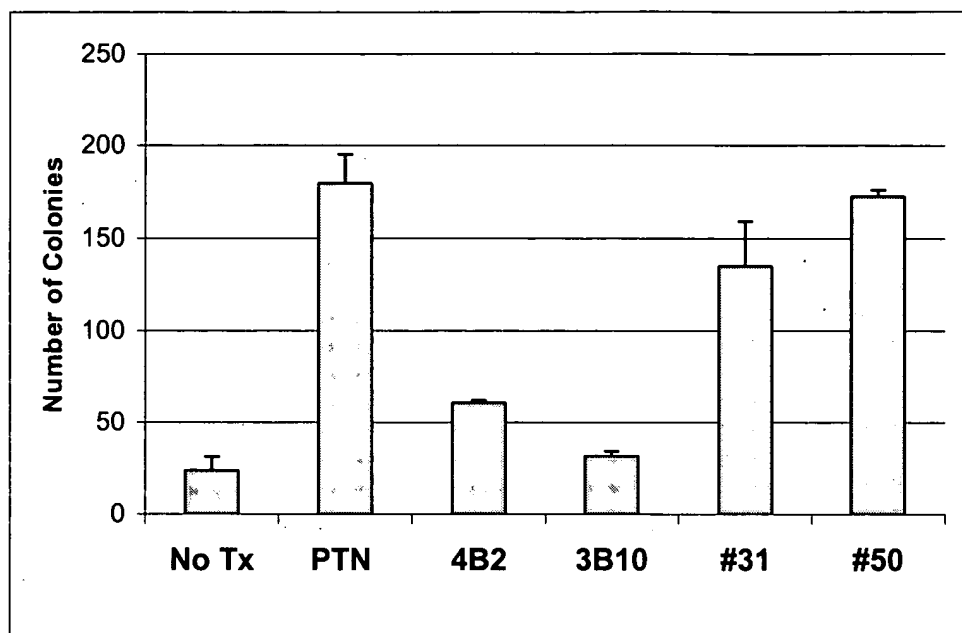
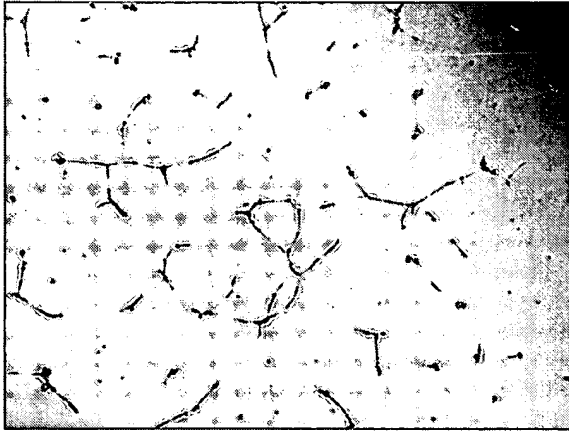


FIG. 9

SW13/PTN C.M



SW13/PTN C.M + #27 (5  $\mu$ g/ml).

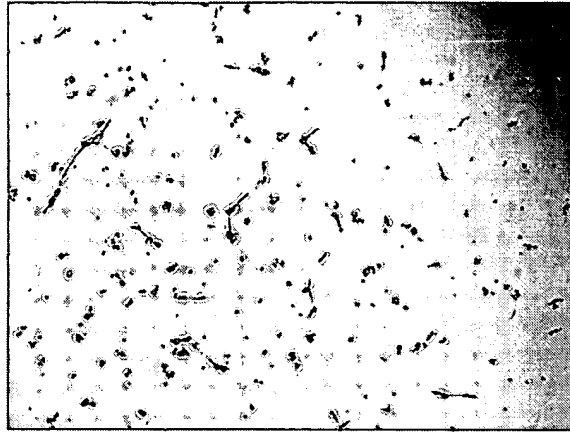


FIG. 10

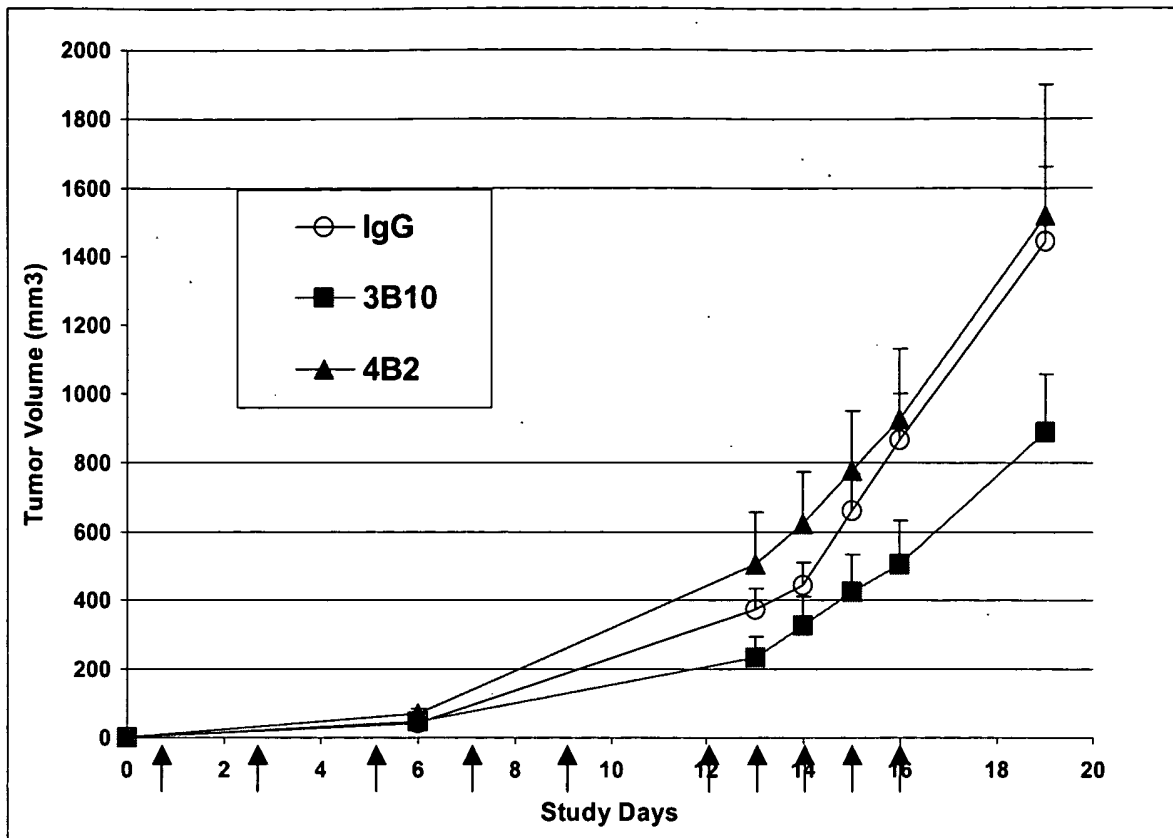


FIG. 11